

# HAJELA 1147-1154

## Terms & Conditions

Electronic Supporting Information files are available without a subscription to ACS Web Editions. The American Chemical Society holds a copyright ownership interest in any copyrightable Supporting Information. Files available from the ACS website may be downloaded for personal use only. Users are not otherwise permitted to reproduce, republish, redistribute, or sell any Supporting Information from the ACS website, either in whole or in part, in either machine-readable form or any other form without permission from the American Chemical Society. For permission to reproduce, republish and redistribute this material, requesters must process their own requests via the RightsLink permission system. Information about how to use the RightsLink permission system can be found at <http://pubs.acs.org/page/copyright/permissions.html>.

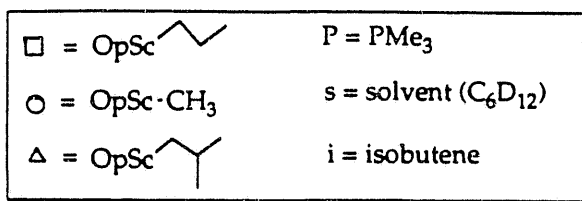


ACS Publications

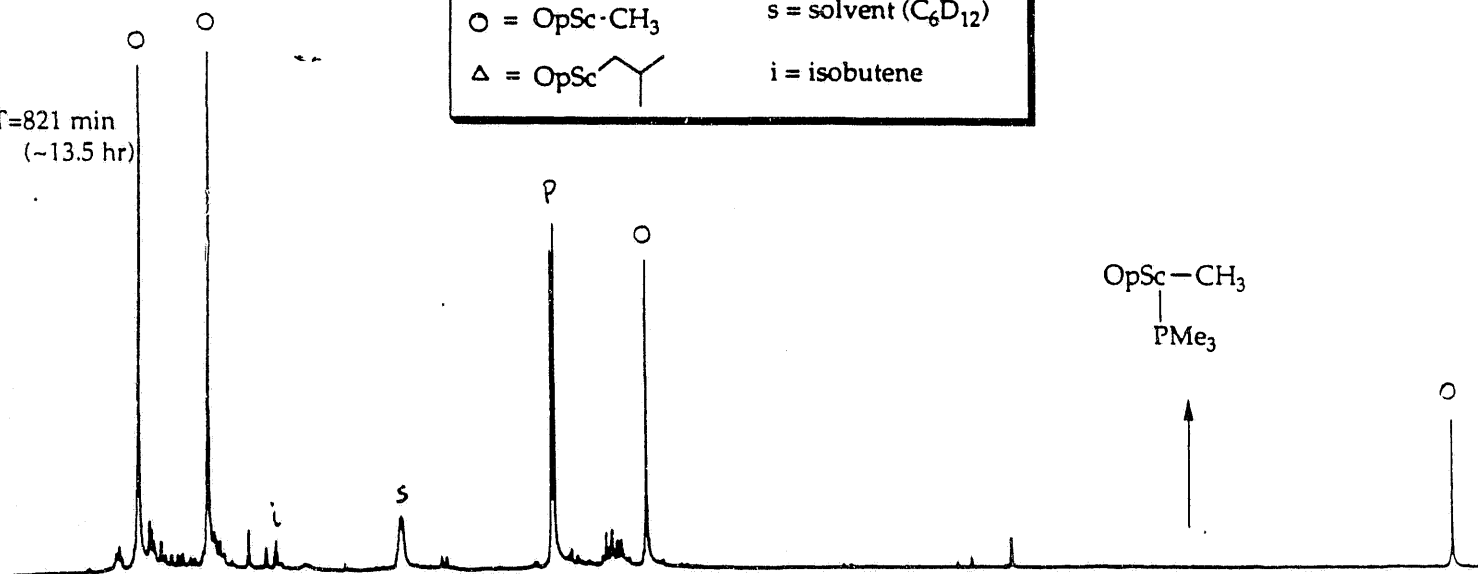
MOST TRUSTED. MOST CITED. MOST READ.

L-1154-m1

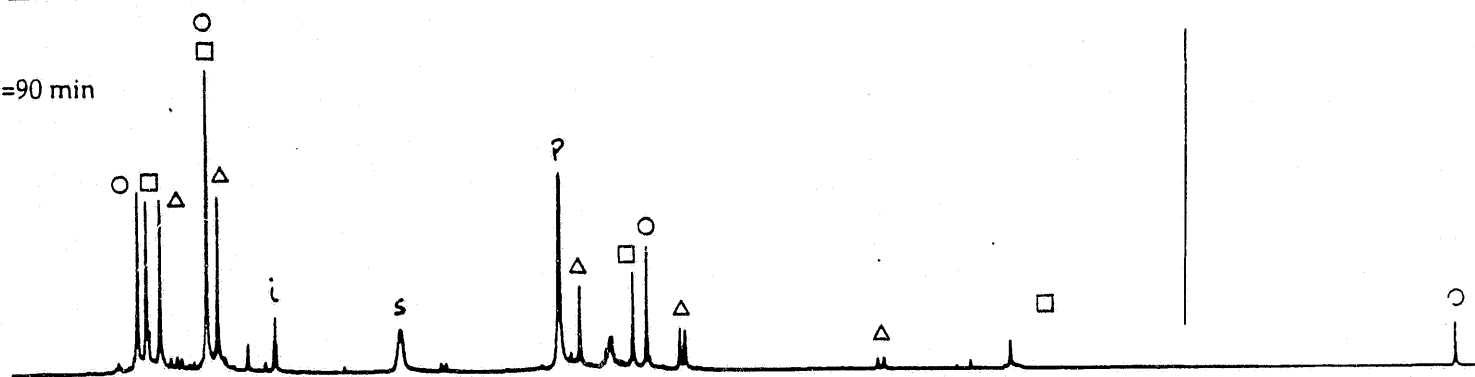
Selected Spectra From Kinetic Run:  $\text{OpScH}(\text{PMe}_3) + \text{CH}_2=\text{CHCH}_3 \longrightarrow \text{OpScCH}_3(\text{PMe}_3)$



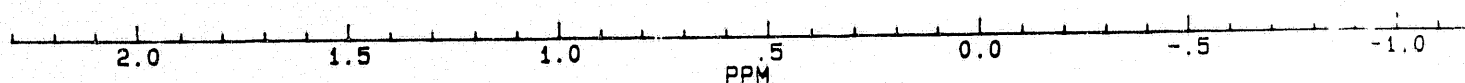
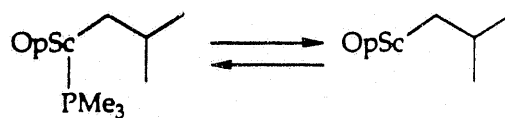
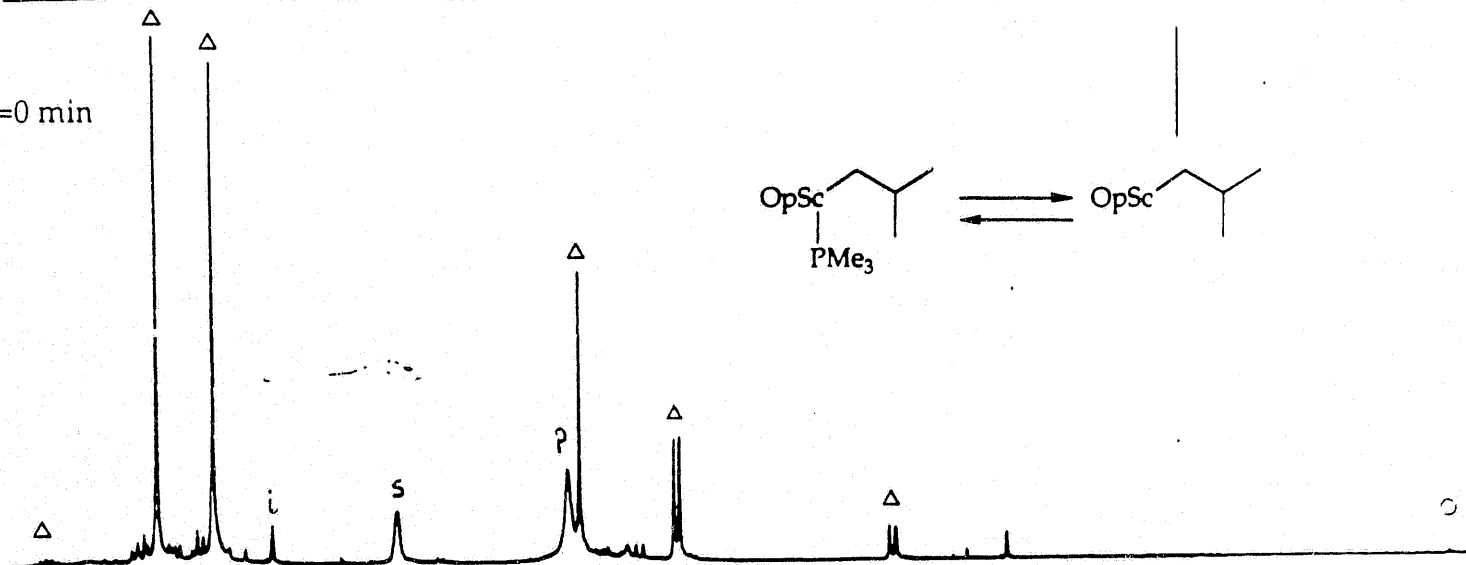
T=821 min  
(~13.5 hr)



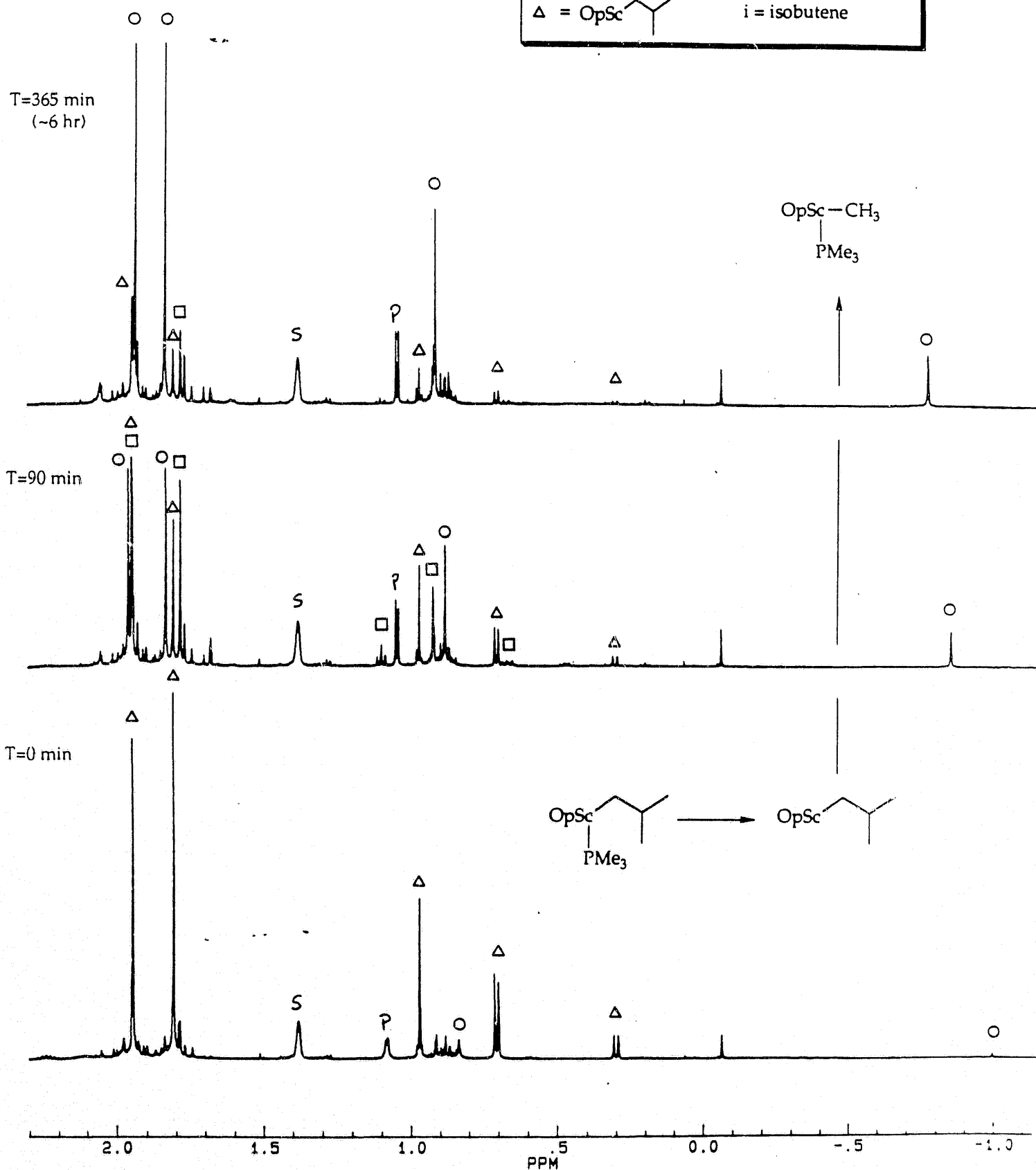
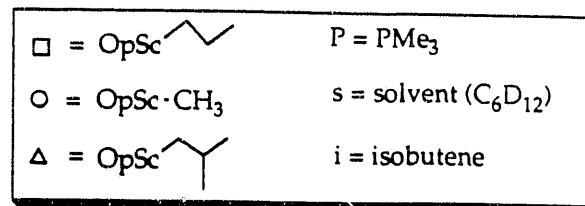
T=90 min



T=0 min

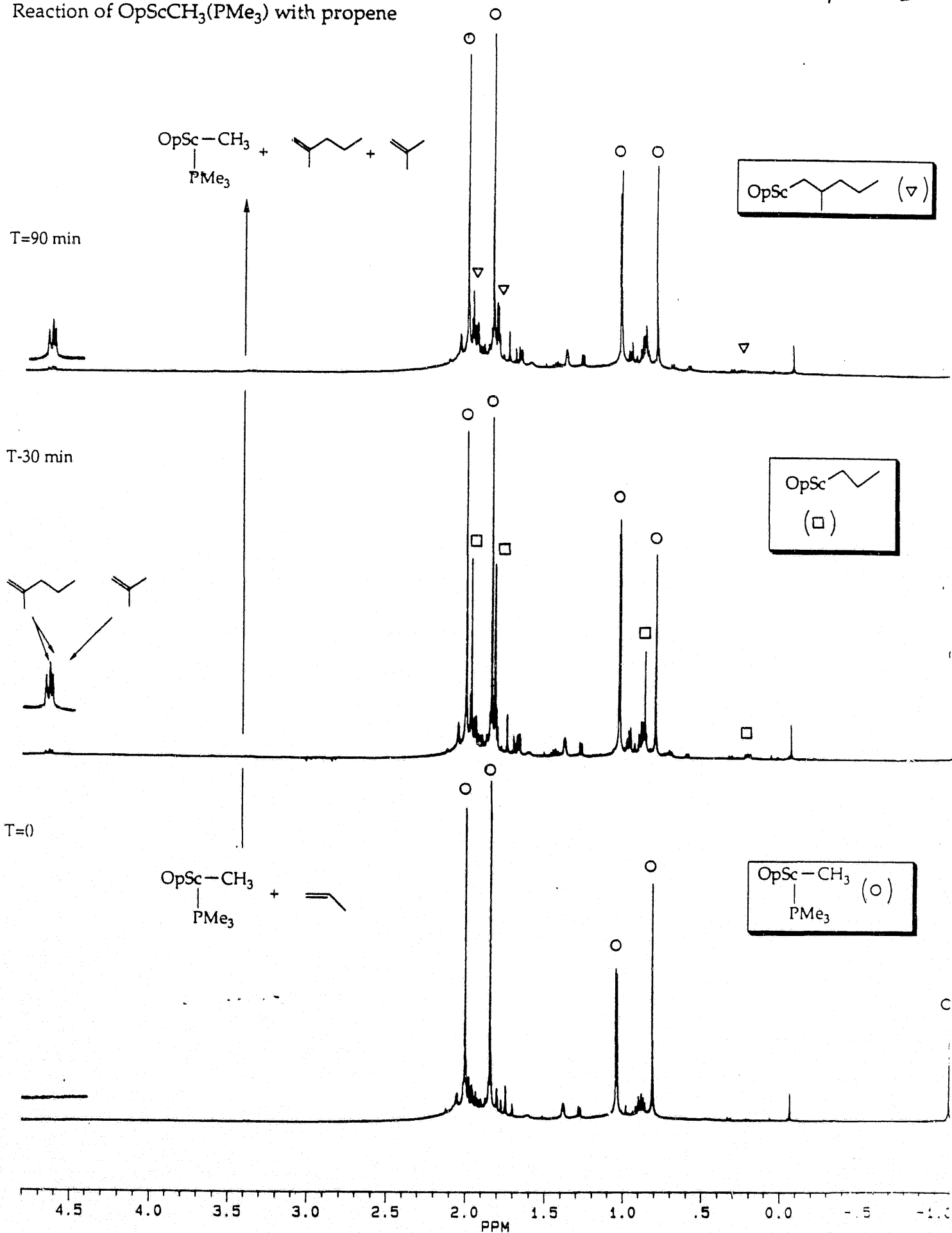


L-1154-m2



Rearrangement of OpSc(isobutyl) After Pumping Off PMe<sub>3</sub>

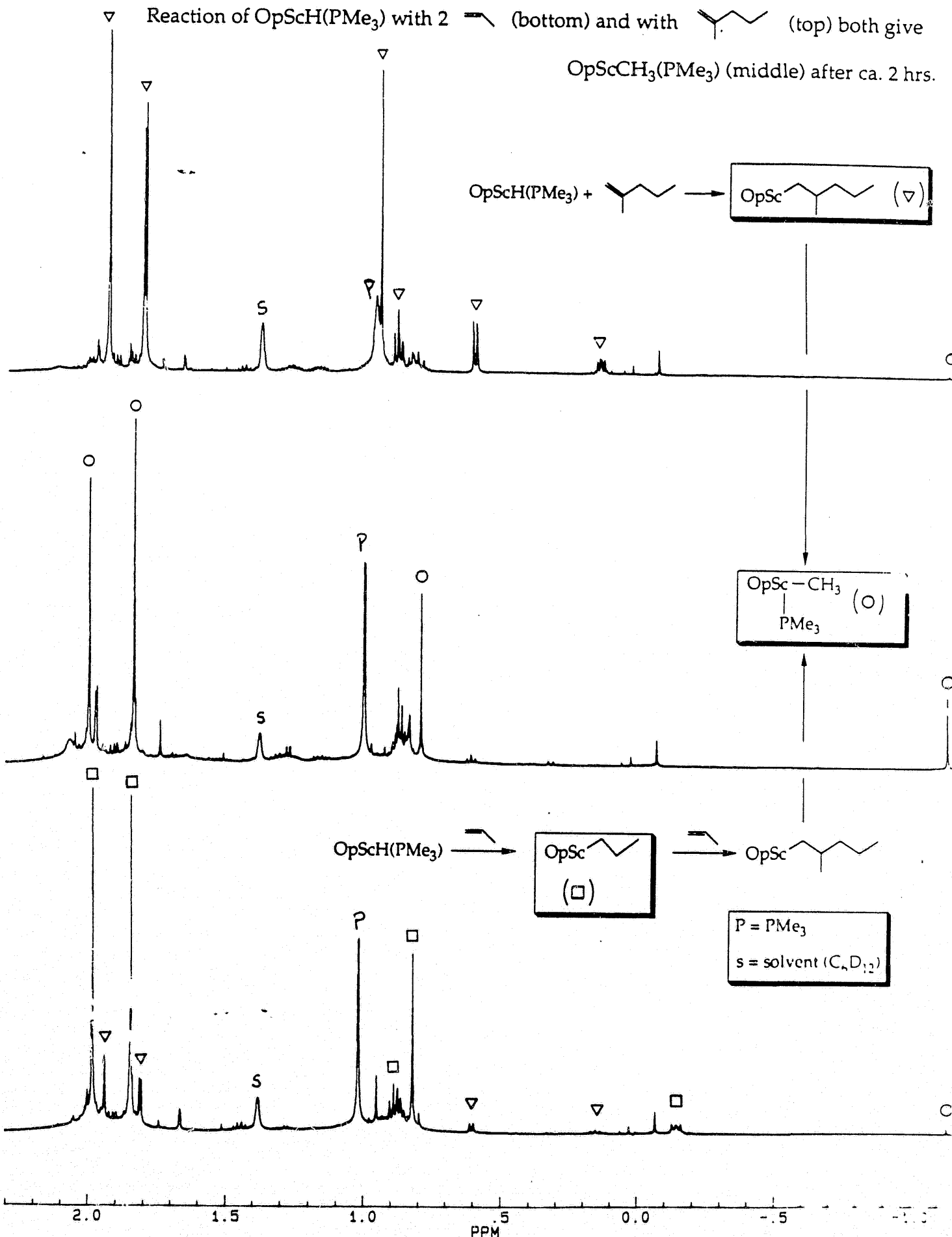
L-1154-m3

Reaction of  $\text{OpScCH}_3(\text{PMe}_3)$  with propene



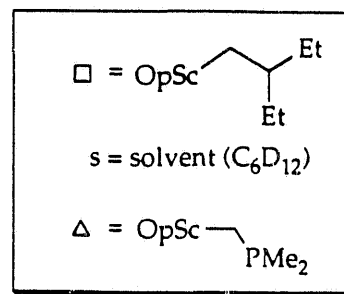
L-1154-m4

Reaction of  $\text{OpScH(PMe}_3\text{)}$  with 2  (bottom) and with  (top) both give  $\text{OpScCH}_3\text{(PMe}_3\text{)}$  (middle) after ca. 2 hrs.

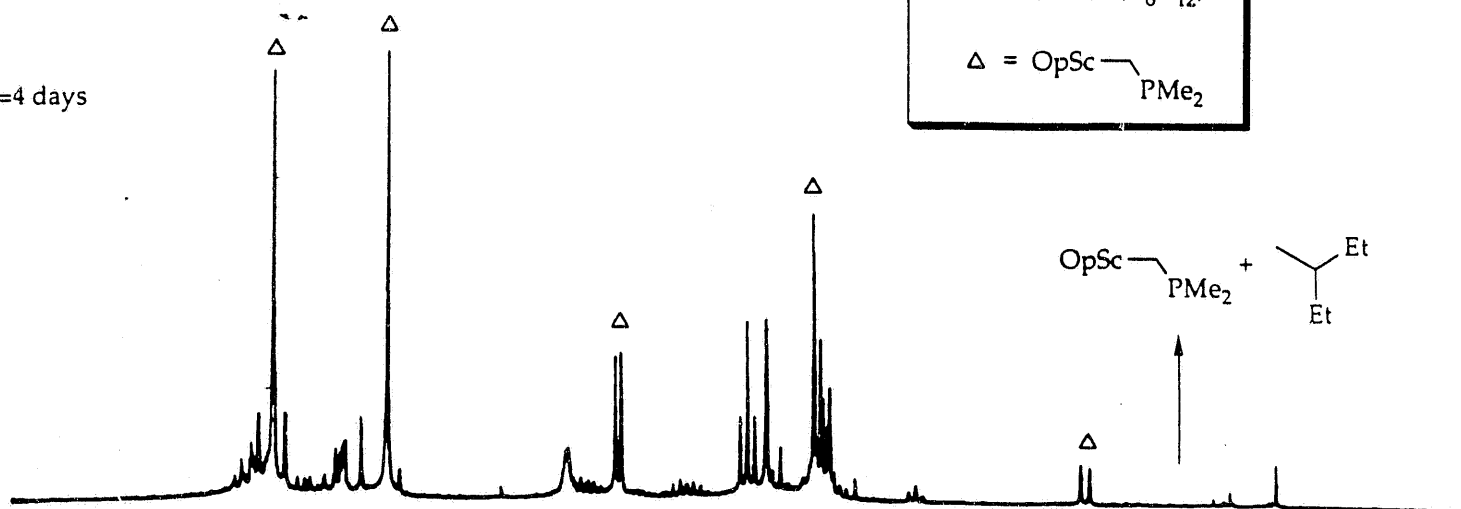


# Rearrangement of $\text{OpSc}(\text{2-ethylbutyl})$ to $\text{OpScCH}_2\text{PMe}_2$

L-1154-m5



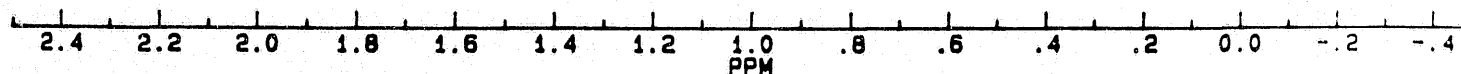
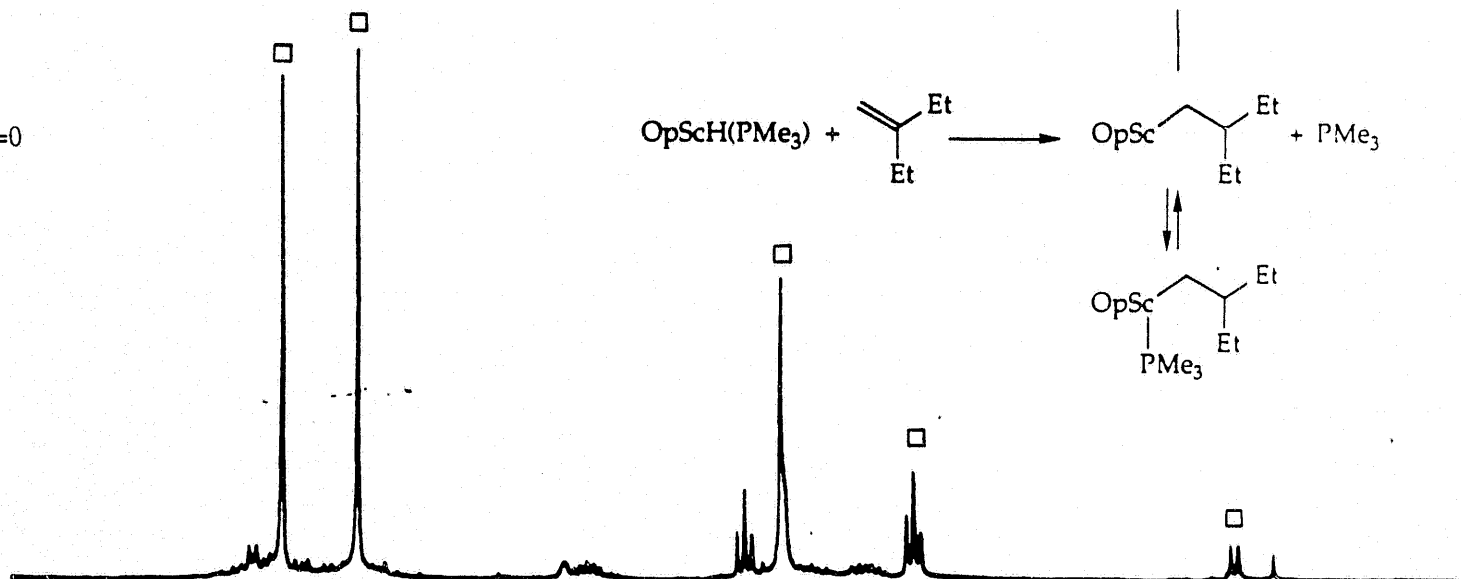
T=4 days



T=2 days

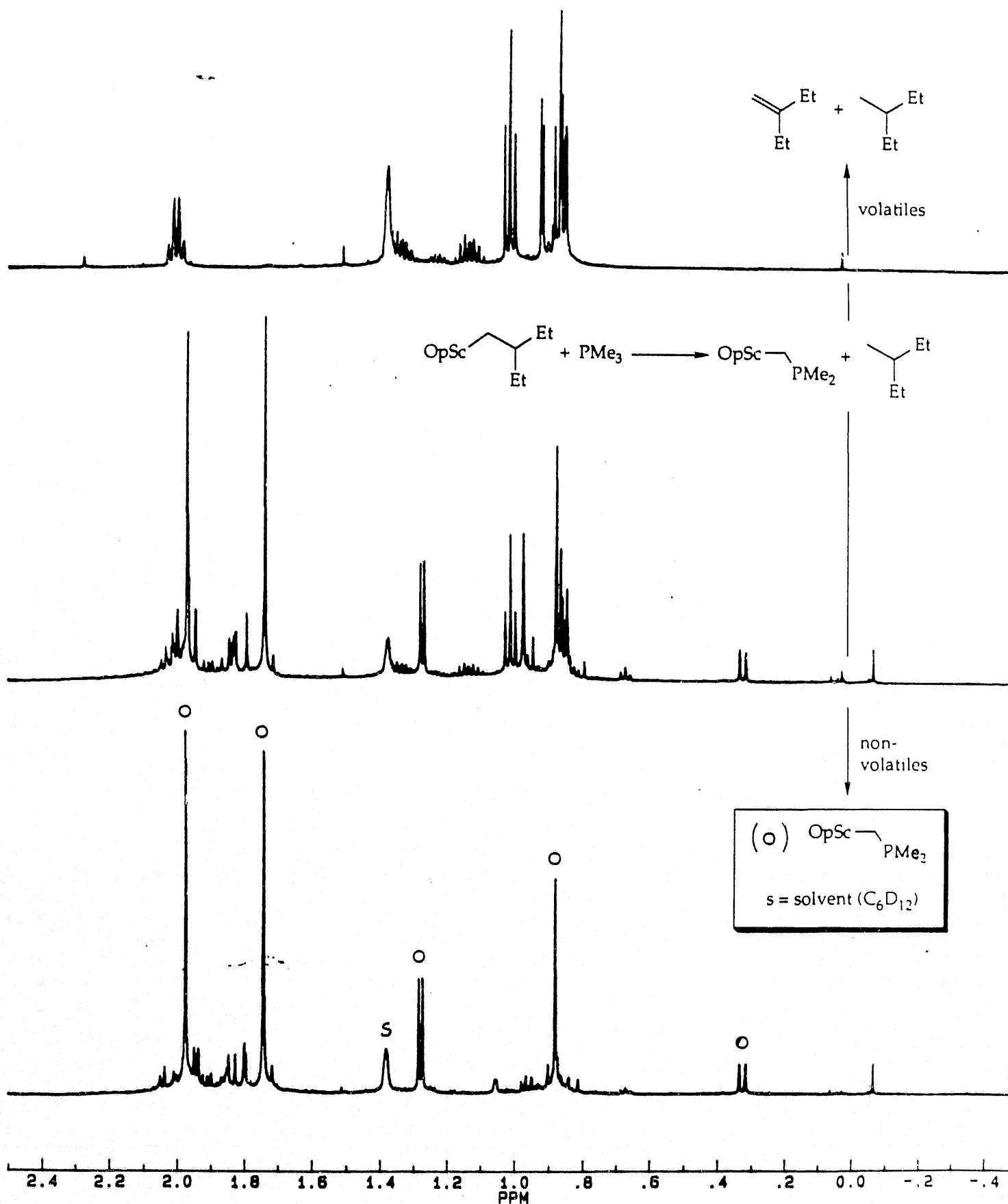


T=0

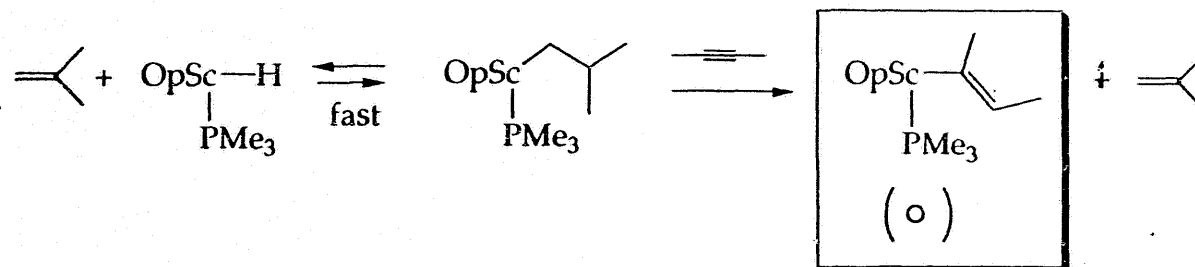


L-1154-m6

# Characterization $\text{OpScCH}_2\text{PMe}_2$ by Pumping off Volatiles



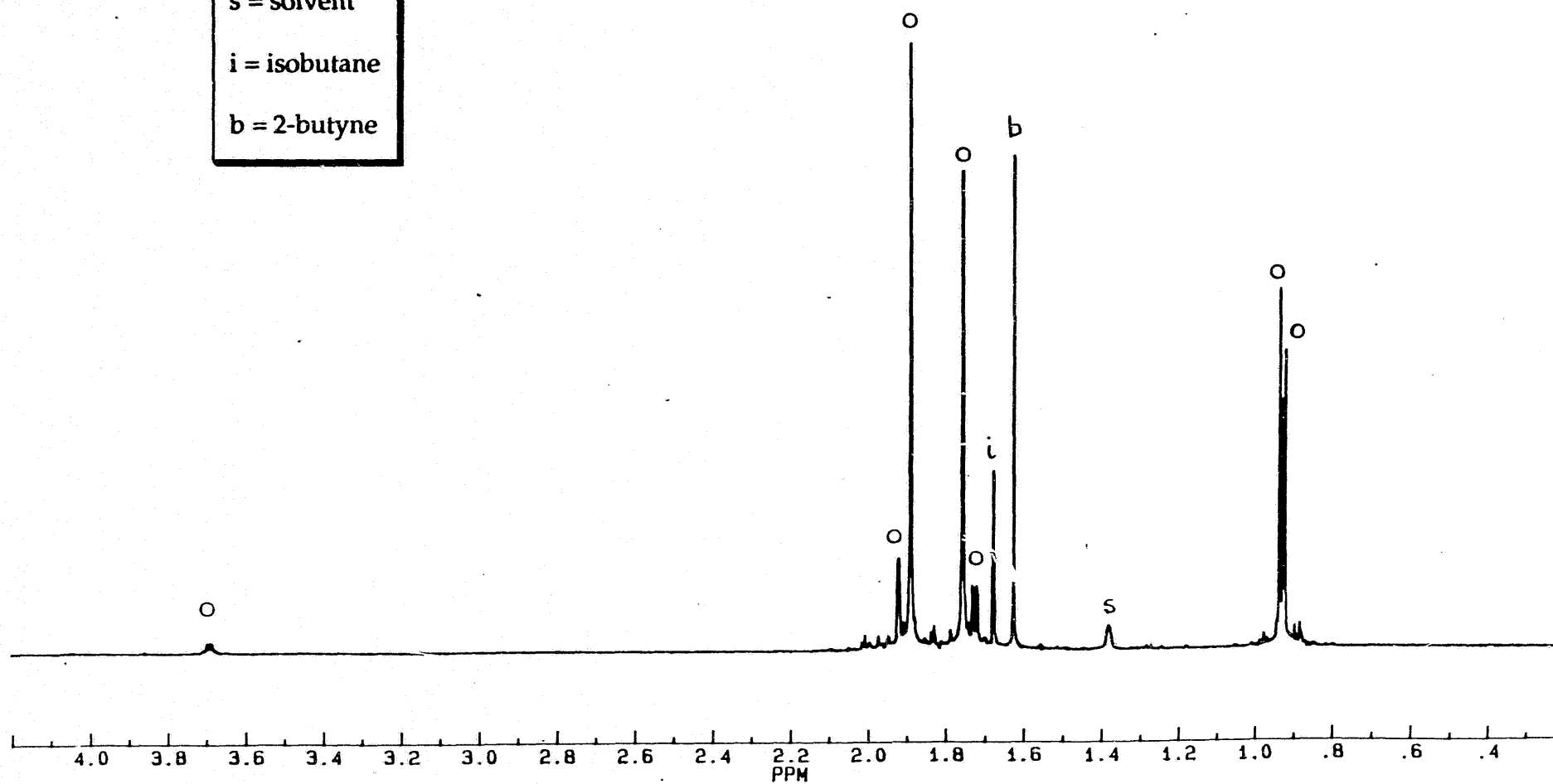
REACTION OF OPSC (ISOBUTYL) WITH EXCESS 2-BUTYNE



s = solvent

i = isobutane

b = 2-butyne



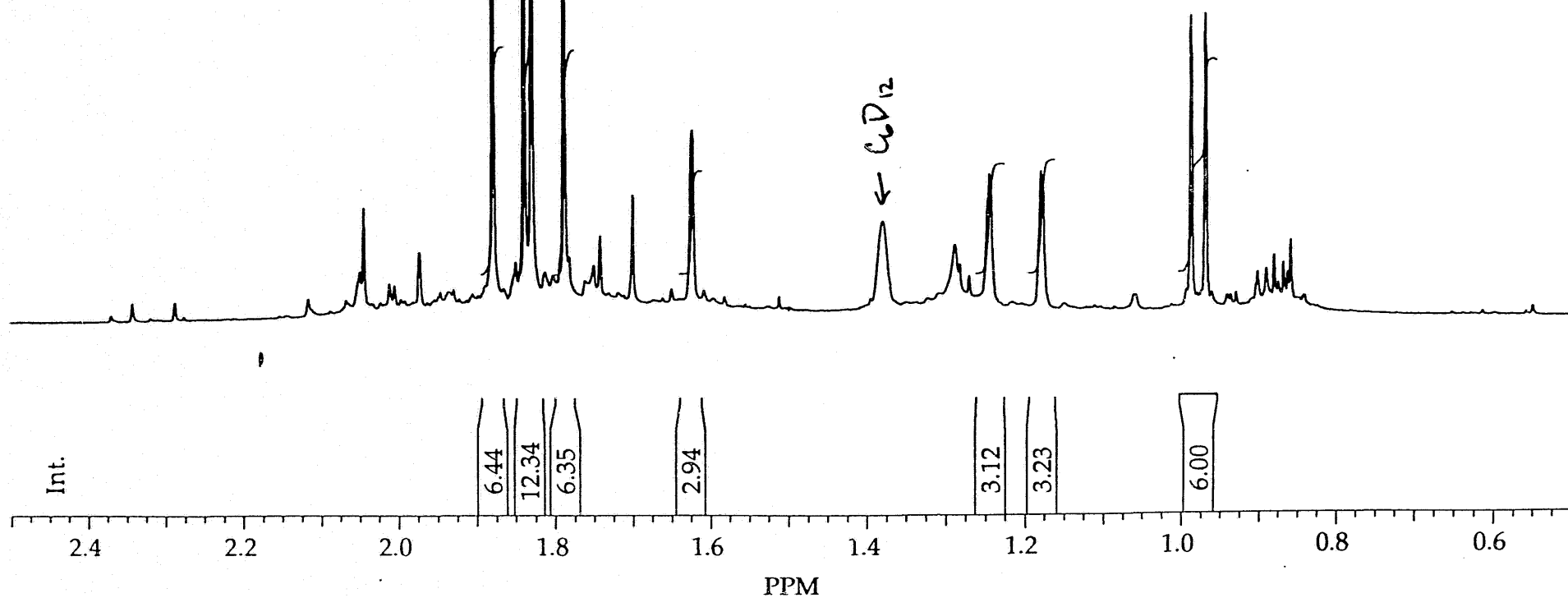
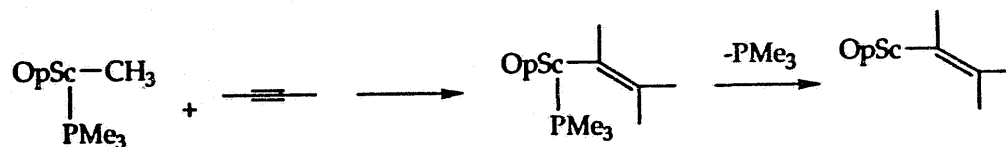
L-1154-m7



PPM

1.8797  
1.8398  
1.8300  
1.7892  
  
1.6245  
  
1.2453  
1.1803  
1.1778  
  
0.9867  
0.9681

Reaction of  $\text{OpScCH}_3(\text{PMe}_3)$  with 2-butyne (after pumping off volatiles).



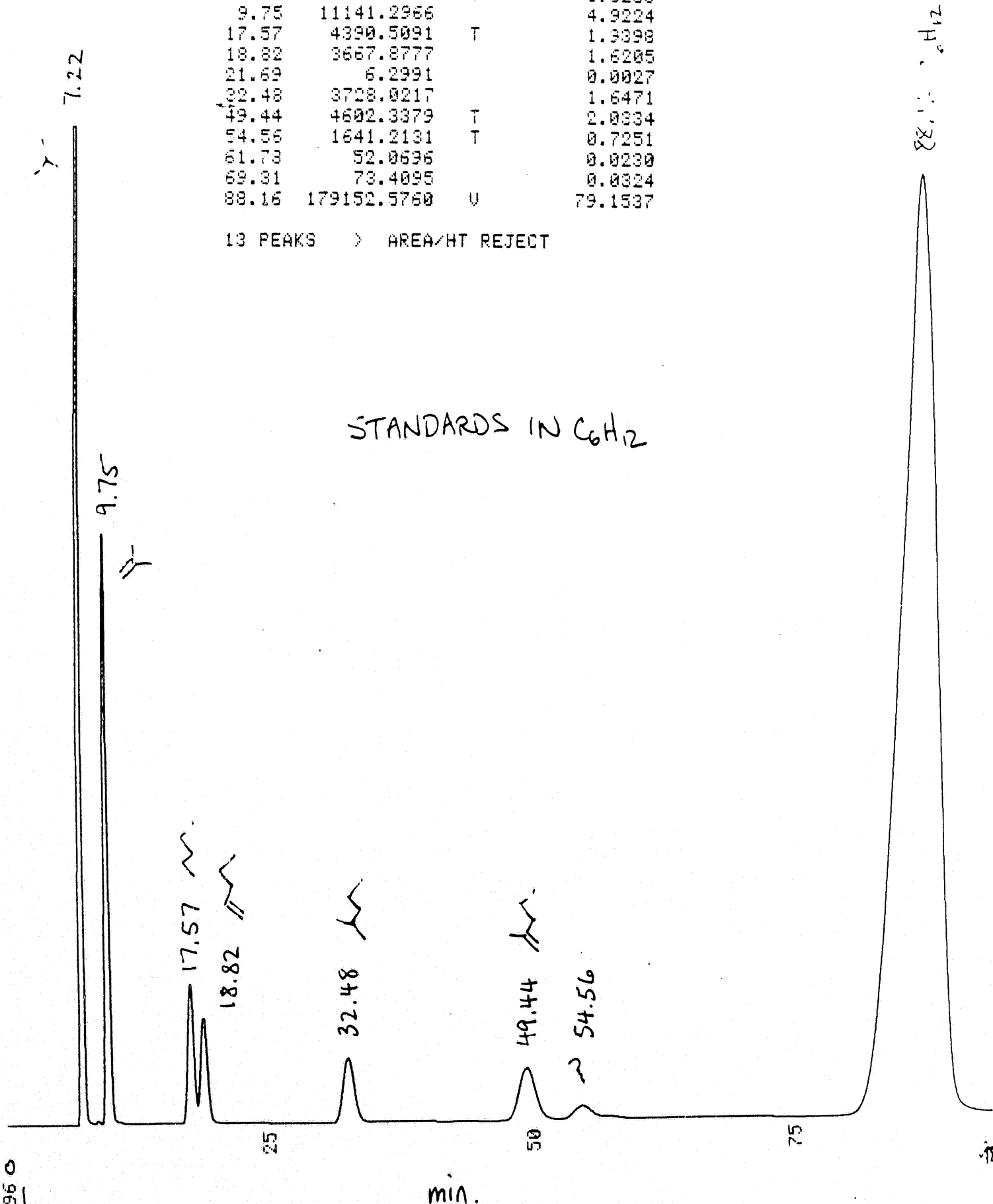
800-7511-7

L-1154-m9

RT	AREA	BC	AREA %
5.88	1.7551		0.0007
7.22	17830.4768		7.8779
8.77	47.1707	U	0.0208
9.75	11141.2966		4.9224
17.57	4390.5091	T	1.3398
18.82	3667.8777		1.6285
21.69	6.2991		0.0027
32.48	3728.0217		1.6471
49.44	4602.3379	T	2.0334
54.56	1641.2131	T	0.7251
61.73	52.0636		0.0230
69.31	73.4095		0.0324
88.16	179152.5760	U	79.1537

13 PEAKS > AREA/HT REJECT

STANDARDS IN C<sub>6</sub>H<sub>12</sub>



METHOD 1 MODIFIED

CALCUL

L-1154-m10

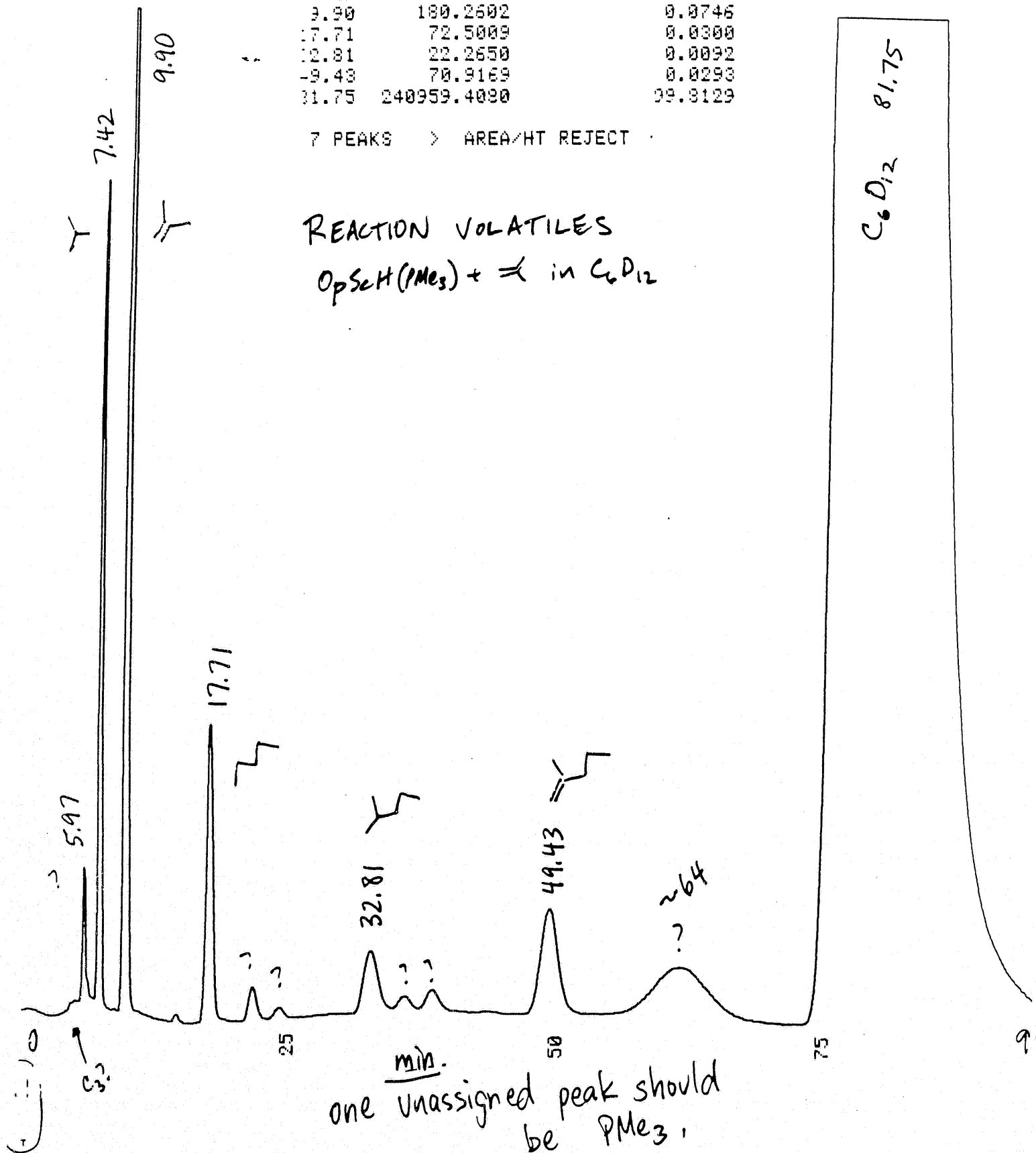
RT	AREA	BC	AREA %
1.37	13.6453		0.0056
7.42	91.9962		0.0381
9.90	180.2602		0.0746
17.71	72.5009		0.0300
32.81	22.2650		0.0092
49.43	70.9169		0.0293
61.75	240959.4090		99.8129

7 PEAKS > AREA/HT REJECT

REACTION VOLATILES

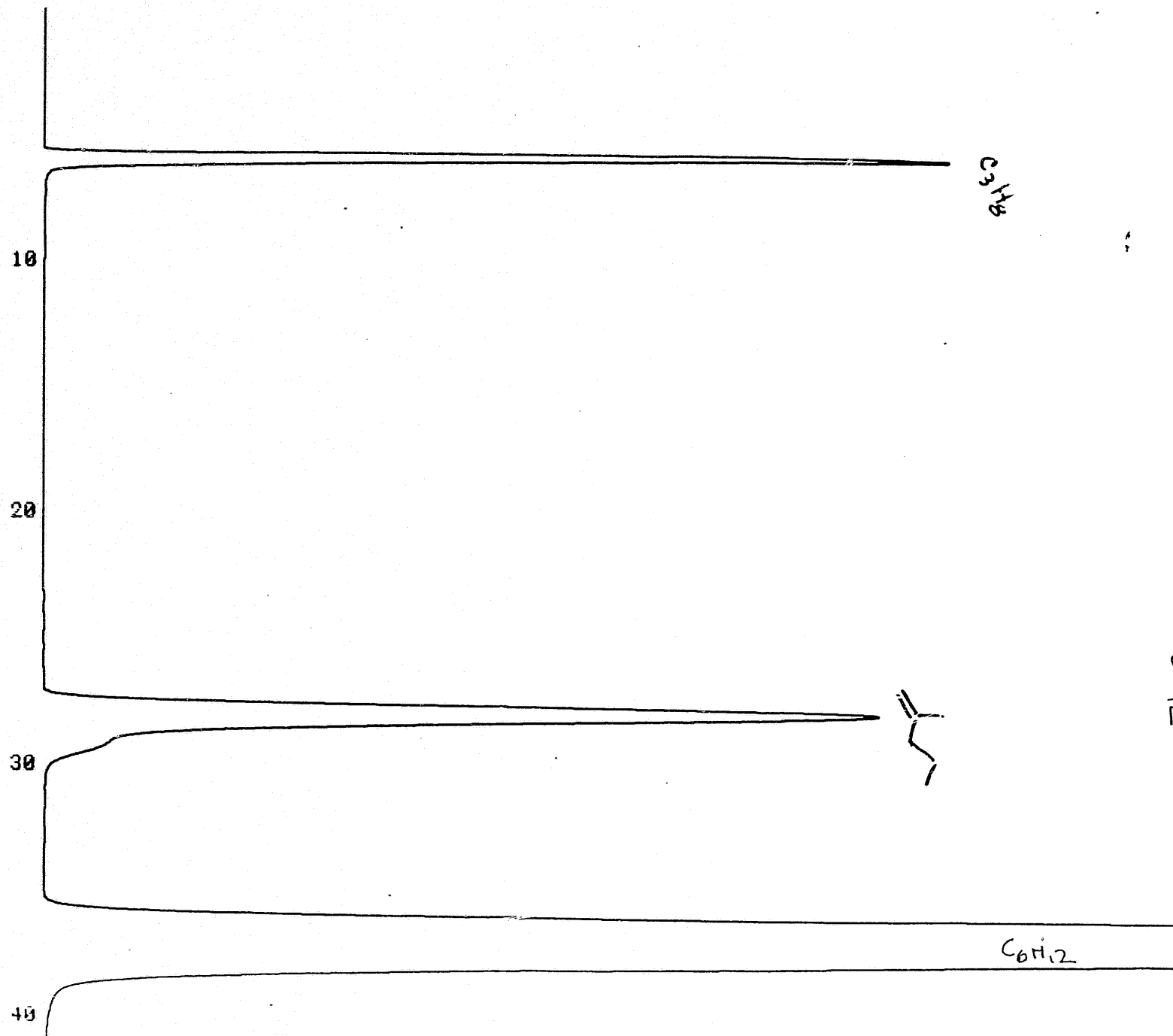
$\text{OpSeH(PMe}_3\text{)} + \text{= in C}_6\text{D}_{12}$

$\text{C}_6\text{D}_{12}$  81.75



METHOD 3 MODIFIED

A 1024



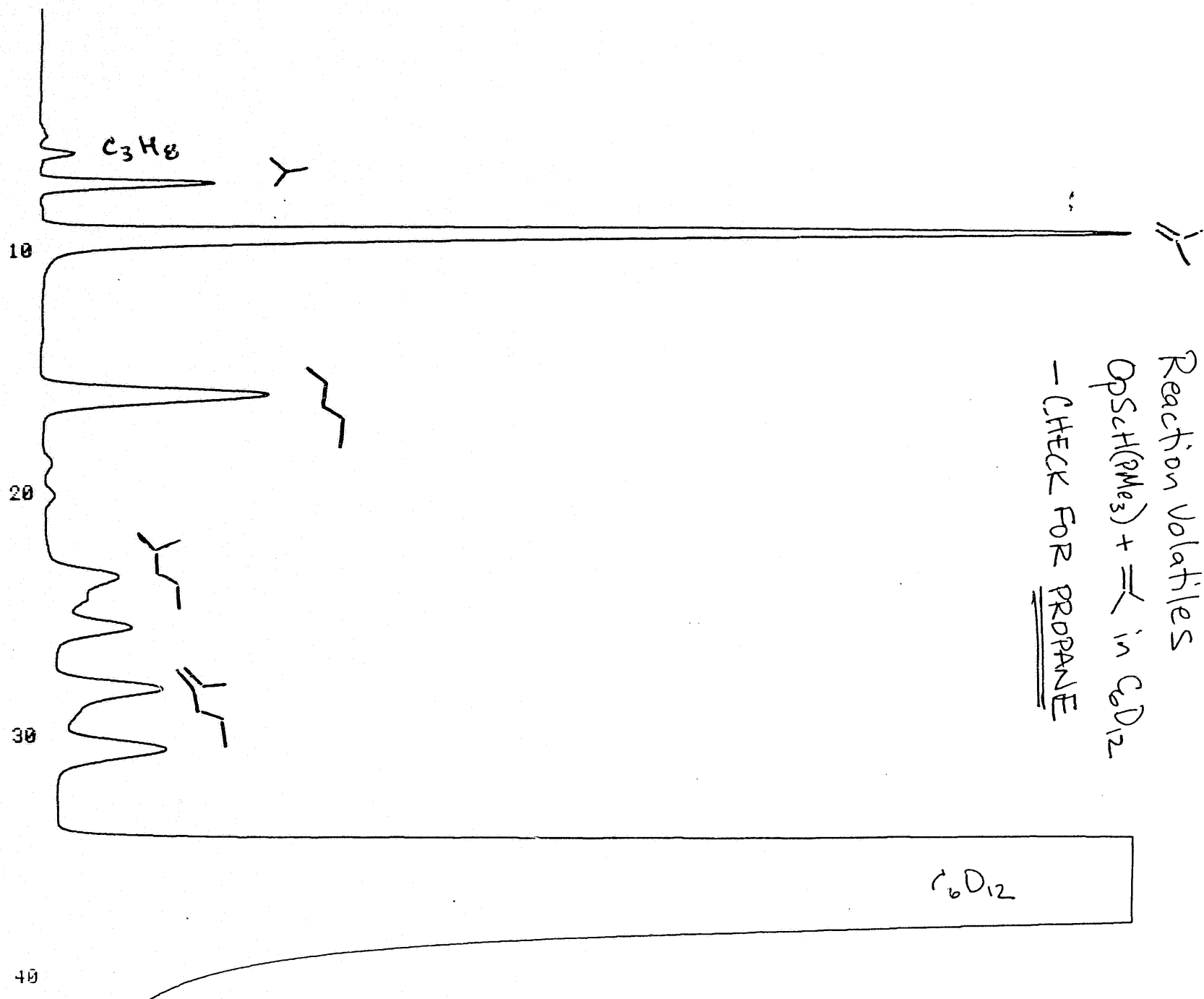
STANDARDS in  $C_6H_{12}$

L-1154-m11

PERKINELMER CORP.

METHOD 3 MODIFIED

A 32



Reaction Volatiles  
 $OpSCH(PMe_3) + \text{alkene}$  in  $C_6D_{12}$   
 - CHECK FOR PROPANE

L-1154-m12

L-1154-m13

\*LIST KINETIC.AU

----- FILE: KINETIC .AU

; \*\* KINETIC \*\*

; PROGRAM TO ACQUIRE A SERIES OF EXPERIMENTS  
; AT INTERVALS AND SAVE ON THE HARD DISK

; LDF/SPH 10TH MAY 1991

1 ZE ; ZERO THE MEMORY  
2 D1 ; RELAXATION DELAY

3 GO=2

4 WR #1 ; WRITE THIS EXPNT. TO DISK  
5 IF #1 ; INCREMENT THE FILE EXTENSION

6 D2 ; DELAY BETWEEN EXPERIMENTS (SECONDS)  
7 IN=1 ; LOOP BACK AND START THE NEXT EXPERIMENT

8 EXIT

; PW = PULSE WIDTH CA. 50 DEG. 4 US  
; D1 = DELAY BETWEEN SCANS CA 2 SECS  
; D2 = DELAY BETWEEN EXPERIMENTS (SECONDS)  
; NS = NUMBER OF SCANS PER EXPERIMENT  
; NE = NUMBER OF EXPERIMENTS  
; RD = 0